3. A method of determining crystal orientation comprising the steps of

(a) mounting the crystal in a holder;

(b) taking a Laue photograph of the crystal;

(c) determining from the photograph the angular orientation of a plurality of planes of the crystal;

(d) transferring the crystal holder to a diffractometer;

(e) selecting a first crystal plane for examination by orienting said plane parallel to the axis of the diffractometer;

(f) scanning the crystal with X-rays and monitoring the diffracted X-rays until the Bragg angle corresponding to the selected plane is determined;

(g) determining the interplanar spacing corresponding to the measured Bragg angle;

(h) determining the Miller indices corresponding to the interplanar spacing so determined;

(i) repeating steps (e) to (h) for the remaining planes.

4. A method for determining crystal orientation comprising the steps of

(a) mounting the crystal in a holder;

(b) taking a Laue photograph of the crystal;

(c) determining from the photograph the relative orientation of a plurality of planes in the crystal;

(d) transferring the crystal holder to a diffractometer having a source of essentially monochromatic radiation for incident X-rays and a detector for diffracted X-rays;

(e) selecting a first crystal plane for examination by orienting the normal to said plane in the plane of the incident and diffracted X-rays;

(f) irradiating the crystal and determining the Bragg angle corresponding to the selected plane; and

(g) determining the interplanar spacing corresponding to the measured Bragg angle and the wave length of X-radiation used;

(h) determining the Miller indices of the selected plane for the interplanar spacing so determined;

(i) repeating steps (e) through (h) for the remaining planes.



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